



PLANETARY SCIENCE TECHNOLOGY REVIEW PANEL



Program Objectives/Purpose

- The Outer Planets Program formulates and implements flagship-class missions to the outer solar system



Brief Summary of Program Content

- The Outer Planets Program currently consists of three elements
 - Cassini/Huygens Mission to Saturn (Phase E)
 - Europa Jupiter System Mission (transitioning to Phase A)
 - SR&T Programs
 - Cassini Data Analysis Program: R&A program as part of of ROSES that solicits and funds scientific research using flight data returned by Cassini
 - Outer Planets Research Program: R&A program as part of ROSES that solicits and funds broad scientific research dealing with the outer solar system



Resource Summary and Utilization

- The Outer Planets Program budget will be released with the President's FY11 budget.
- Historically the Cassini mission has an operating budget of approximately \$80M. The mission has proposed a second extended mission starting in FY11 at a significantly reduced budget level.
- The Europa Jupiter System Mission (EJSM) has a congressionally mandated FY10 budget of \$15M.
- SR&T is currently funded at approximately \$13M/year



Summary of Future Plans

- A decision on the future of the Cassini mission will be announced after the release of the President's FY11 budget.
- The Europa Jupiter System Mission is transitioning from Pre-Phase A study efforts to Phase A for more detailed formulation and technology development.
- An technology development effort has been formulated as part of the SR&T element is under consideration
 - This would be used for tightly focused technology developments coupled to outyear mission(s)



Decision Making Processes Used

- The Cassini mission relies on independent senior reviews to assess science and technical plans for the extended mission
- The decision to prioritize the Europa Jupiter System Mission was reached after 2 years of NASA funded studies of 4 outer planet flagship mission concepts. These studies underwent detailed independent science and TMC reviews.
- SR&T relies on standard independent peer review of scientific research proposals to formulate selection recommendations



What Did and Did Not Work and Why

- What Worked
 - Sustained, long term investment in a Europa mission
 - NASA investment in early and diverse concept studies
 - Independent, rigorous review of study results
 - Maintaining science community involvement in the end to end process
- What Did Not Work
 - The investment in the Europa effort was piecemeal and unevenly provided
 - Divorcing technology development from its parent flight mission
 - Divorcing technologists from flight managers